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***Case Study: Strangler Pattern at Blackboard Learn (2011)***

Blackboard is a company that provides technology for educational institutes, and in 2012, it was suffering from various complications caused by having a codebase about fifteen years old – before the rise of more modern development and coding practices. Then-chief architect David Ashman saw this problem and knew it was only going to get worse over time. As such, he started on a ‘code re-architecting project’ - effectively rewriting the entire codebase to be more amenable to future changes.

The way that Ashman decided to approach this problem was by using the Strangler Fig Pattern – this is a type of development strategy that enables moving from a monolithic architecture to a microservice architecture, by building new components around the original outdated codebase as needed by using APIs instead of changing the codebase itself. Eventually, the new components that surround the original codebase obsolete it, allowing the developers to retire the outdated modules.

Using a Strangler Fig Pattern, Ashman’s project began. creating “Building Blocks” - the various microservice modules that would eventually replace Blackboard’s old codebase. In addition, the pivot to creating microservices allowed the various development teams to work autonomously, with minimal coordination being necessary. Finally, any changes made to the individual modules were more self-contained than they were on the monolithic codebase, making them easier to develop and safer to deploy.

The results speak for themselves: code commits (which Ashman used to judge how many improvements were being made) skyrocketed after the project was launched, and the obsolete codebase shrunk as developers chose to migrate that code into the new Building Blocks. The previous issues that the codebase had began to disappear, as it was piece by piece replaced by the new microservice infrastructure. Overall, this case study proves to us how the transition from monolithic infrastructure to microservice infrastructure can be done successfully. Although the Strangler Fig Pattern is not the only way to make this change, this demonstrates that proper usage of the technique can be effective at enabling the transition while causing minimal disruptions at a large scale.

*Source:*

Kim, Humble, Debois, & Willis. *The DevOps Handbook, 2nd Edition*. (2021). IT Revolution.